



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/197.012 11/20/98 ROITMAN

D 10981133-1

EXAMINER

MM92/0830

IP ADMINISTRATION
LEGAL DEPARTMENT 20BN
HEWLETT PACKARD COMPANY
PO BOX 10301
PALO ALTO CA 94303-0890

GILBANY, K
ART UNIT

PAPER NUMBER

2879
DATE MAILED:

08/30/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/197,012

Applicant(s)

ROITMAN ET AL.

Examiner

Karabi Guharay

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, and 7-14 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.

- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: ----AN ORGANIC LIGHT EMITTING DEVICE HAVING A CURRENT LIMITING STRUCTURE-----.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 7-11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Guha et al. (US 4647813, hereinafter Guha).

Regarding claim 1, Guha discloses an organic light emitting device comprising an electrode (74 of Fig 7) a current self limiting structure (ZnSe/Ca stack, 78, lines 39-40 of column 4) and an organic stack (76) located between the electrode (74) and the current self limiting structure (78, see Fig 7)

Regarding claim 5, Guha discloses that the current self-limiting structure comprises an anisotropically conductive material (lines 39-40 of column 40).

Regarding claim 7, Guha discloses that the current self-limiting structure resides between the electrode (74 of Fig 7) and a conducting layer (80 of Fig 7).

Regarding claim 8, Guha discloses that the conducting layer (80 of Fig 7) is embedded within the current self-limiting structure (78, see Fig 7).

Regarding claim 9, Guha discloses that the conducting layer (80 of Fig 7) resides over the current self-limiting structure (78, see Fig 7).

Regarding claim 10, Guha discloses an organic light emitting device which increases the reliability of the device (lines 15-17 of column 5) comprising the steps of forming an organic light emitting device (70 of Fig 7) and incorporating a current self limiting structure (78 of Fig 7) within the organic light emitting device (70).

Regarding claim 11, Guha discloses that the current self-limiting structure is formed in contact with an electrode (80 of Fig 7).

Regarding claim 14, Guha discloses that the self limiting structure (78 of Fig 7) comprises an anisotropically conductive material (lines 39-40 of column 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guha et al.(US 5739545) as applied to claim 1 above, and further in view of Kawashima et al.(US 5721562).

Regarding claim 2, Guha meets all the limitations of claim 2 except for the fact that the self limiting structure resides in contact with the electrode (74 of Fig 7).

However, Kawasaki discloses a current limiting structure (insulating films having columnar crystal structure, 3a of Fig 2) resides in contact with electrode (2, 6), this renders low voltage requirement for the display device (26-31 Of column 2).

Thus, it would have been obvious to one having ordinary skill in the art to have the current limiting structure of Guha residing in contact with the electrode, since this will have the advantage of obtaining a low voltage display device.

Regarding claim 3, kawasaki discloses that the current self limiting structure (3a of Fig 1) is applied as a patterned lattice structure over the electrode (2 of Fig 1). The same reason for combining art as in claim 2 applies here.

Regarding claim 4, Kawasaki discloses that the current self-limiting structure (3a of Fig 1) applies over the electrode (2) as a grid defining windows in which the electrodes are applied. The same reason for combining art as in claim 2 applies.

Claim 12 recites essentially the same limitations of claim 3. So claim 12 is rejected as claim 3 (see rejection of claim 3).

Claim 13 recites essentially the same limitations of claim 4. So claim 13 is rejected as claim 4 (see rejection of claim 4).

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2879

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K.G

Karabi Guharay
Patent Examiner
Art Unit 2879



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800